IN THE CLAIMS:

1. (currently amended) Method providing a homogeneous test for the detection of any antitumour substances substitutive of paclitaxel in the paclitaxel binding site of microtubules, wherein:

said method is based on the combination of a target and a probe~~;~~ and comprises the following steps:

- adding the test substance or test substances ~~to test are added~~ to a solution of a ~~the~~ target ~~which consists~~ consisting of microtubules and ~~the~~ a fluorescent probe bound to the target,
- determining the displacement equilibrium curve of the ~~competitor substances of the interaction of the probe with the target is determined by measuring the~~ probe from the target by any test substance, wherein the biomimetic compound is identified by measuring a drop in anisotropy ~~in~~ at varying test substance concentrations, or the variation of ~~intensity of~~ fluorescence intensity of the probe, or ~~of~~ the resonance energy transfer of the probe to a suitable acceptor,
- and identifying a biomimetic compound of paclitaxel, wherein the biomimetic compound is identified ~~if~~ by a drop in ~~the~~ anisotropy of the fluorescence of the probe ~~is observed~~ or by means of the drop in resonance energy transfer to the probe bound to a ligand.

2. (currently amended) Method in accordance with claim 1, wherein the target of this method are microtubules assembled *in vitro* which are stabilised by means of chemical cross-linking and are indefinitely conserved ~~by means of~~ in liquid nitrogen following dialysis against a conservation and cryopreservation buffer.

3. (cancelled)

4. (currently amended) Method in accordance with claim 1, wherein the probe of this method is any fluorescent derivative of paclitaxel that is specifically bound to microtubules, including among others

~~7-O-[N-(2,7-dfluoro-4'-fluoresceincarbonyl)-L-alanyl]paclitaxel~~ 7-O-[N-(2,7-difluoro-4'-fluoresceincarbonyl)-L-alanyl]paclitaxel,

~~7-O-[N-(2,7-dfluoro-4'-fluoresceinsulphonyl)-L-alanyl]paclitaxe,l~~ 7-O-[N-(2,7-

difluoro-4'-fluoresceinsulphonyl)-L-alanyl]paclitaxel,
7-O-[N-(4'-tetramethylrhodaminrecarbonyl)-L-alanyl]paclitaxel,
~~7-O-[N-(2,7-dfluoro-4'-fluoresceincarbonyl)-L-beta-alanyl]paclitaxel~~ 7-O-[N-(2,7-difluoro-4'-fluoresceincarbonyl)-L-beta-alanyl]paclitaxel.

5. (currently amended) Method in accordance with claim 2, wherein the probe of this method is any fluorescent derivative of paclitaxel that is specifically bound to microtubules, including among others
~~7-O-[N-(2,7-dfluoro-4'-fluoresceincarbonyl)-L-alanyl]paclitaxel~~ 7-O-[N-(2,7-difluoro-4'-fluoresceincarbonyl)-L-alanyl]paclitaxel,
~~7-O-[N-(2,7-dfluoro-4'-fluoresceinsulphonyl)-L-alanyl]paclitaxe,l~~ 7-O-[N-(2,7-difluoro-4'-fluoresceinsulphonyl)-L-alanyl]paclitaxel,
7-O-[N-(4'-tetramethylrhodaminrecarbonyl)-L-alanyl]paclitaxel,
~~7-O-[N-(2,7-dfluoro-4'-fluoresceincarbonyl)-L-beta-alanyl]paclitaxel~~ 7-O-[N-(2,7-difluoro-4'-fluoresceincarbonyl)-L-beta-alanyl]paclitaxel.

6. (Cancelled)

7. (original) Method in accordance with claim 1, characterised in that it can be robotised and in that the measurements can be made using fluorescence plate readers.

8. (original) Method in accordance with claim 2, characterised in that it can be robotised and in that the measurements can be made using fluorescence plate readers.

9. (Cancelled)

10. (original) Method in accordance with claim 4, characterised in that it can be robotised and in that the measurements can be made using fluorescence plate readers.

11. (original) Method in accordance with claim 5, characterised in that it can be robotised and in that the measurements can be made using fluorescence plate readers.

12. (Cancelled)

13. (original) Method for the high-efficiency (HTP) identification of antitumour compounds acting on the binding site of paclitaxel in the microtubules, deriving from natural or synthetic sources, comprising the steps of the method of claim 1.

14. (original) A method for the evaluation of new derivatives of taxanes, epotilones, discodermalide, eleuterobine, sarcodicitine and any other binding site ligands of paclitaxel in the microtubules, comprising the steps of the method of claim 1.

15. (currently amended) The method of claim 13, for the ~~evaluation~~ quantification of the content of said antitumour compounds in a natural production source.

16. (currently amended) The method of claim 14, for the ~~evaluation~~ quantification of the content of said new derivatives in a natural production source.

17. (original) A method for the evaluation of new sources for the extraction or preparation of potentially active substances starting from pharmacologically non-active or semi-active precursors, comprising the steps of the method of claim 1.

18. (original) A method for the development of tools for conducting of tests in oncological and/or biological research related to cellular microtubules, comprising the method of claim 1.